

OIPE

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RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/711,619

DATE: 12/01/2000
 TIME: 11:36:45

Input Set : A:\2054581.app
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3 <110> APPLICANT: Johal, Gurmukh S
 4 Mullan, Dilbag S
 6 <120> TITLE OF INVENTION: SORGHUM DWARFING GENES AND METHODS OF USE
 8 <130> FILL REFERENCE: 5718-100 (035718/205458)
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/711,619
 C--> 11 <141> CURRENT FILING DATE: 2000-11-13
 13 <150> PRIOR APPLICATION NUMBER: 60/165,176
 14 <151> PRIOR FILING DATE: 1999-11-12
 16 <160> NUMBER OF SEQ ID NOS: 9
 18 <170> SOFTWARE: PatentIn Ver. 2.1
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 21 <211> LENGTH: 2139
 22 <212> TYPE: DNA
 23 <213> ORGANISM: Sorghum bicolor
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 29 gagggccaacc tgcgcggccc gctccggcgc tgcctctgga agggcgagat cgcgcgcgac 240
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 TC 1700 MAIL ROOM

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/711,619

DATE: 12/04/2000
TIME: 11:36:45

Input Set : A:\2054581.app
Output Set : N:\CRF3\12042000\I711619.raw

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60 ggtggcggag cgggggtcgc actcgcacct gctcaagcac catccgagcg ggtgctaccg 2100
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79 acgtggactt ctcgtaccgc tgcgcgcgcg acatccaggt gttcgcgcgc ctgagcctcc 600
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90 tcaagcacca tcccgacggg tgcacgcgcg ggtatgctga gctgcgcgcg ctgacgggcy 1260
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97 <213> ORGANISM: Sorghum bicolor
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101 <222> LOCATION: (1)..(1245)
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106 1 5 10 15
108 atg ttc atg aag gcc ttc tgg ggg gac ctg gag gcc ggc cac gcc agg 96
109 Met Phe Met Lys Gly Phe Ser Gly Asp Leu Glu Ala Ala His Ala Arg
110 20 25 30
112 gcc acg caa atc gcg gcc gag gcc gtg gcc aac ctg cgc acc gtg gcc 114
113 Ala Thr Gln Ile Ala Gly Glu Ala Val Ala Asn Leu Arg Thr Val Ala
114 35 40 45
116 gcg ttc aac gcg gag cgc aag atc acg ggg ctg ttc gag gcc aac ctg 192

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121 Arg Gly Pro Leu Arg Arg Cys Phe Trp Lys Gly Gln Ile Ala Gly Ser
122      65                      70                      75                      80
124 gcc tac gcc gtc gcc cag ttc ctg ctg tac gcc tcc tac gcc ctg gcc 288
125 Gly Tyr Gly Val Ala Gln Phe Leu Leu Tyr Ala Ser Tyr Ala Leu Gly
126      85                      90                      95
128 ctg tgg tac gcc cgc tgg ctg ctg aag cgc gtc tcc gac ttc tgg 336
129 Leu Trp Tyr Ala Ala Trp Leu Val Lys His Gly Val Ser Asp Phe Ser
130      100                     105                     110
132 cgc acc atc cgc gtc ttc atg gtc ctg atg gtc tcc gcc aac gcc gcc 384
133 Arg Thr Ile Arg Val Phe Met Val Leu Met Val Ser Ala Asn Gly Ala
134      115                     120                     125
136 gcc gag acc ctg acc ctg gcc ccg gac ttt gtc aag gcc gcc gcc gcc 432
137 Ala Glu Thr Leu Thr Leu Ala Pro Asp Phe Val Lys Gly Gly Arg Ala
138      130                     135                     140
140 atg cgc tcc gtc ttc gag acc atc gac cgc aaa acc gag gtc gag ccc 480
141 Met Arg Ser Val Phe Glu Thr Ile Asp Arg Lys Thr Glu Val Glu Pro
142      145                     150                     155                     160
144 gac gac gtc gac gcc gcc ccg gtc ccg gag cgc ccc aag gcc gag gtc 528
145 Asp Asp Val Asp Ala Ala Pro Val Pro Glu Arg Pro Lys Gly Glu Val
146      165                     170                     175
148 gag ctg aag cgc gtc gac ttc tgg tac ccg tgg cgc ccg gac atc cag 576
149 Glu Leu Lys His Val Asp Phe Ser Tyr Pro Ser Arg Pro Asp Ile Gln
150      180                     185                     190
152 gtc ttc cgc gac ctg agc ctc cgc gcc cgc aag acc ctg gcc 624
153 Val Phe Arg Asp Leu Ser Leu Arg Ala Arg Ala Gly Lys Thr Leu Ala
154      195                     200                     205
156 ctg gtc ggt ccg acc gcc tgc gcc aag agc tgg gtc ctg gcc ctg gtc 672
157 Leu Val Gly Pro Ser Gly Cys Gly Lys Ser Ser Val Leu Ala Leu Val
158      210                     215                     220
160 cag cgc ttc tac gag ccc acc tcc ggg cgc gtc ctc ctg gac gcc aag 720
161 Gln Arg Phe Tyr Glu Pro Thr Ser Gly Arg Val Leu Leu Asp Gly Lys
162      225                     230                     235                     240
164 gac gtc cgc aag tac acc ctg cgc gcc ctg cgc gcc gtc gtc gcc gtc 768
165 Asp Val Arg Lys Tyr Asn Leu Arg Ala Leu Arg Arg Val Val Ala Val
166      245                     250                     255
168 gcc ccg cag gag ccg ttc ctg ttc gcc gcc agc atc cgc gac aac atc 816
169 Ala Pro Gln Glu Pro Phe Leu Phe Ala Ala Ser Ile His Asp Asn Ile
170      260                     265                     270
172 gcc tac ggg cgc gag gcc gcc acc gag gcc gag gtc gtc gcc gcc gcc 864
173 Ala Tyr Gly Arg Glu Gly Ala Thr Glu Ala Glu Val Val Glu Ala Ala
174      275                     280                     285
176 acc cag gcc aac gcc cgc cgc ttc atc gcc gcc ctg ccg gag gcc tac 912
177 Thr Gln Ala Asn Ala His Arg Phe Ile Ala Ala Leu Pro Glu Gly Tyr
178      290                     295                     300
180 gcc acc cag gtc gcc gcc gcc gcc gtc gtc ctg gcc gcc cag gcc 960
181 Gly Thr Gln Val Gly Glu Arg Gly Val Gln Leu Ser Gly Gly Gln Arg

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PATENT APPLICATION: US/09/711,619

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184 cag cgg atc gcg atc gcg cgc gct ggt aag cag cgg cca leq tgc tgc 1008
185 Glu Arg Ile Ala Ile Ala Arg Ala Gly Lys Gln Arg Pro Ser Cys Cys
186          325          330          335
188 tgg acg aag cga cca gcg cgc tgg acg ccg agt cgg agc ggt gcg tgc 1056
189 tip thr arg arg pro ala arg irp thr pro ser arg ser gly ala cys
190          340          345          350
192 agg aag cgc tgg agc gcg cgg ggt ccg ggc gca cca cca tgg tgg tgg 1104
193 Arg Arg Arg irp ser ala arg gly pro gly ala pro pro ser irp irp
194          355          360          365
196 cgc acc ggc tgg cca cgg tgc gcg gcg cgc acc cca leq cgg tca tgc 1152
197 Arg thr gly trp pro arg cys ala ala arg thr pro ser arg ser ser
198          370          375          380
200 acg acg gca aag tgg cgg agc aag ggt cgc act cgc acc tgc tca aac 1200
201 thr thr ala arg tip arg ser arg gly arg thr arg thr cys ser ser
202 385          390          395          400
204 acc atc ccg acg ggt gct acg cgc gga tgc tgc agc tgc agc ggc 1245
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223 Ala thr gln ile ala gly glu ala val ala asn leu arg thr val ala
224 35 40 45
226 Ala Phe Asn Ala Glu Arg Lys Ile Thr Gly Leu Phe Glu Ala Asn Leu
227 50 55 60
229 Arg Gly Pro Leu Arg Arg Cys Phe Irp Lys Gly Gln Ile Ala Gly Ser
230 65 70 75 80
232 Gly Tyr Gly Val Ala Gln Phe Leu Leu Tyr Ala Ser Tyr Ala Leu Gly
233 85 90 95
235 Leu Irp Tyr Ala Ala Irp Leu Val Lys His Gly Val Ser Asp Phe Ser
236 100 105 110
238 Arg Thr Ile Arg Val Phe Met Val Leu Met Val Ser Ala Asn Gly Ala
239 115 120 125
241 Ala Glu Thr Leu Thr Leu Ala Pro Asp Phe Val Lys Gly Gly Arg Ala
242 130 135 140
244 Met Arg Ser Val Phe Glu Thr Ile Asp Arg Lys Thr Glu Val Glu Pro
245 145 150 155 160
247 Asp Asp Val Asp Ala Ala Pro Val Pro Glu Arg Pro Lys Gly Glu Val
248 165 170 175
250 Glu Leu Lys His Val Asp Phe Ser Tyr Pro Ser Arg Pro Asp Ile Gln
251 180 185 190

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253 Val Phe Arg Asp Leu Ser Leu Arg Ala Arg Ala Gly Lys Thr Leu Ala
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256 Leu Val Gly Pro Ser Gly Cys Gly Lys Ser Ser Val Leu Ala Leu Val
257      210      215      220
259 Gln Arg Phe Tyr Glu Pro Thr Ser Gly Arg Val Leu Leu Asp Gly Lys
260 225      230      235      240
262 Asp Val Arg Lys Tyr Asn Leu Arg Ala Leu Arg Arg Val Val Ala Val
263      245      250      255
265 Ala Pro Gln Glu Pro Phe Leu Phe Ala Ala Ser Ile His Asp Asn Ile
266      260      265      270
268 Ala Tyr Gly Arg Glu Gly Ala Thr Glu Ala Glu Val Val Glu Ala Ala
269      275      280      285
271 Thr Gln Ala Asn Ala His Arg Phe Ile Ala Ala Leu Pro Glu Gly Tyr
272      290      295      300
274 Gly Thr Gln Val Gly Glu Arg Gly Val Gln Leu Ser Gly Gly Gln Arg
275 305      310      315      320
277 Gln Arg Ile Ala Ile Ala Arg Ala Gly Lys Gln Arg Pro Ser Cys Cys
278      325      330      335
280 Trp Thr Arg Arg Pro Ala Arg Trp Thr Pro Ser Arg Ser Gly Ala Cys
281      340      345      350
283 Arg Arg Arg Trp Ser Ala Arg Gly Pro Gly Ala Pro Pro Ser Trp Trp
284      355      360      365
286 Arg Thr Gly Trp Pro Arg Cys Ala Ala Arg Thr Pro Ser Arg Ser Ser
287      370      375      380
289 Thr Thr Ala Arg Trp Arg Ser Arg Gly Arg Thr Arg Thr Cys Ser Ser
290 385      390      395      400
292 Thr Ile Pro Thr Gly Ala Thr Arg Gly Cys Cys Ser Cys Ser Gly
293      405      410      415
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302 <220> FEATURE:
303 <223> OTHER INFORMATION: Description of Artificial Sequence:oligonucleotide
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319 <400> SEQUENCE: 6
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26

17

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/711,619

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TIME: 11:36:46

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I:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date